

| Ref # | Hits    | Search Query   | DBs   | Default Operator | Plurals | Time Stamp       |
|-------|---------|--|---|------------------|---------|------------------|
| L1    | 2668    | ((342/70) or (342/71) or (342/72) or (342/76) or (342/79) or (342/104) or (342/117) or (342/174) or (342/175)).CCLS.                         | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR               | OFF     | 2005/04/14 10:57 |
| L2    | 1397    | 1 and @ad<="20020222"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/04/14 10:57 |
| S1    | 1785257 | auto or automotive or vehicular or (motor adj vehicle) or car or traffic   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/04/14 10:52 |
| S2    | 83502   | radar  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/04/14 08:25 |
| S3    | 15114   | S1 and S2  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/04/14 08:26 |
| S4    | 106030  | multi-lobe or multi-beam or (multi adj (beam or lobe)) or multibeam or multilobe or ((plurality or plural or multiple) near6 (beam or lobe)) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/04/14 08:28 |
| S5    | 996     | S3 and S4  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/04/14 08:28 |
| S6    | 690833  | lens   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/04/14 08:28 |

|     |         |   |   |    |     |                  |
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| S7  | 282433  | S5 and S6   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/04/14 08:28 |
| S8  | 343     | S5 and S6   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/04/14 08:29 |
| S9  | 1321722 | oblique or obliquely or slant or<br>aslant or downward  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/04/14 09:04 |
| S10 | 119     | S8 and S9   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/04/14 08:29 |
| S11 | 40833   | parallel near5 (ground or road or<br>roadway or street) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/04/14 08:59 |
| S12 | 11      | S8 and S11  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/04/14 08:59 |
| S13 | 249233  | oblique or obliquely                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/04/14 09:04 |
| S14 | 37216   | ("342").CLAS.   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | OFF | 2005/04/14 09:04 |
| S15 | 116     | S4 and S13 and S14                                      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2005/04/14 09:05 |

|     |     |             |   |    |    |                  |
|-----|-----|-------------|---|----|----|------------------|
| S16 | 113 | S15 not S10 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/04/14 09:13 |
| S17 | 18  | S8 and S13  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2005/04/14 09:14 |

## SEARCH NOTES FOR EAST AND IEEE

SERIAL NUMBER

10505402

EAST: search history attached

Search terms: (auto <or> automotive <or> vehicular <or> (motor vehicle) <or> car <or> traffic) <and> radar <and> (multi-lobe <or> multi-beam <or> multibeam <or> multilobe)

- 1. Eight-channel 77-GHz front-end module with high-performance synthesized signal generator for FM-CW sensor applications** Mayer, W.; Meilchen, M.; Grabherr, W.; Nuchter, P.; Guhl, R.;  
Microwave Theory and Techniques, IEEE Transactions on  
Volume 52, Issue 3, March 2004 Page(s):993 - 1000
- 2. Compact multibeam dual-frequency (24 and 77 GHz) imaging antenna for automotive radars** Schoenlinner, B.; Ebling, J.P.; Kempel, L.C.; Rebeiz, G.M.;  
Microwave Conference, 2003. 33rd European  
Volume 2, 7-9 Oct. 2003 Page(s):785 - 788 vol.2
- 3. Wide-scan spherical-lens antennas for automotive radars**  
Schoenlinner, B.; Xidong Wu; Ebling, J.P.; Eleftheriades, G.V.; Rebeiz, G.M.;  
Microwave Theory and Techniques, IEEE Transactions on  
Volume 50, Issue 9, Sept. 2002 Page(s):2166 - 2175
- 4. Millimeter-wave folded reflector antennas with high gain, low loss, and low profile**  
Menzel, W.; Pilz, D.; Al-Tikriti, M.;  
Antennas and Propagation Magazine, IEEE  
Volume 44, Issue 3, June 2002 Page(s):24 - 29
- 5. Offset cylindrical reflector antenna fed by a parallel-plate Luneburg lens for automotive radar applications in mm-wave**  
Young-Jin Park; Herschlein, A.; Wiesbeck, W.;  
Antennas and Propagation Society International Symposium, 2002. IEEE  
Volume 4, 16-21 June 2002 Page(s):588 - 591 vol.4
- 6. Multi-beam antenna of short-range navigation system of a car**  
Lindvall, A.V.; Lindvall, V.R.; Shcherbakov, G.I.;  
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9-13 Sept. 2002 Page(s):567 - 568
- 7. Compact multibeam imaging antenna for automotive radars**  
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- 8. Millimeter-wave printed circuit antenna system for automotive applications**  
Denisenko, V.V.; Shubov, A.G.; Majorov, A.V.; Egorov, E.N.; Kashaev, N.K.;  
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Volume 3, 20-25 May 2001 Page(s):2247 - 2250 vol.3
- 9. Design of a nonradiative dielectric Rotman lens in the millimeter wave frequency**  
Jae-Gon Lee; Jeong-Hae Lee; Heung-Sik Tae;  
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- 10. A low profile 77 GHz three beam antenna for automotive radar**  
Kolak, F.; Eswarappa, C.;  
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**11. New conception of the low cost multibeam antennas in the MM-wave regime for radar systems of transport means**

Minin, I.V.; Minin, O.V.;

Vehicular Technology Conference, 1999. VTC 1999 - Fall. IEEE VTS 50th  
Volume 5, 19-22 Sept. 1999 Page(s):3043 - 3046 vol.5

**12. Multi-beam automotive radar front end using non-contact cylindrical NRD switch**

Tanizaki, T.; Nishida, H.; Nishiyama, T.; Yamada, H.; Sakamoto, K.; Ishikawa, Y.;  
Microwave Symposium Digest, 1998 IEEE MTT-S International  
Volume 2, 7-12 June 1998 Page(s):521 - 524 vol.2

**13. Simple design of dual-beam leaky-wave antennas in microstrips**

Luxey, C.; Latheurte, J.-M.;

Microwaves, Antennas and Propagation, IEE Proceedings -  
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**14. Performance analysis and optimization of vehicular spread spectrum radar using multi-beam antenna**

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**15. Vehicular spread spectrum radar using multi-beam antenna**

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**16. A low cost W-band multi-beam Doppler radar for automotive applications**

Rasshofer, R.H.; Biebl, E.M.;

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Volume 2, 8-13 June 1997 Page(s):971 - 974 vol.2

**17. Millimeter-wave imaging of traffic scenarios**

Schneider, R.; Wanielik, G.; Wenger, J.;

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19-20 Sept. 1996 Page(s):327 - 332

**18. Unequally-spaced multiple-beam synthesis for bifunctional radar**

Valle, P.; Naldi, M.; Bardati, F.;

Phased Array Systems and Technology, 1996., IEEE International Symposium on  
15-18 Oct. 1996 Page(s):171 - 176

**19. Congruential frequency hop signals for multi-user environments: a comparative analysis**

Bellegarda, J.R.;

Acoustics, Speech, and Signal Processing, 1990. ICASSP-90., 1990 International  
Conference on  
3-6 April 1990 Page(s):2903 - 2906 vol.5

**20. Time-frequency properties of extended quadratic congruential frequency hop signals**

Bellegarda, J.R.;

Acoustics, Speech, and Signal Processing, 1989. ICASSP-89., 1989 International  
Conference on  
23-26 May 1989 Page(s):2669 - 2672 vol.4

INSPEC R 10/505402

Search strategy

| No. | Database | Search term   | Info added since | Results |
|-----|----------|---|------------------|---------|
| 1   | INZZ     | (auto OR automotive OR vehicular OR motor ADJ vehicle OR car OR traffic) AND radar AND (multi-lobe OR multi-beam OR multibeam OR multilobe) | unrestricted     | 23      |

Saved: 14-Apr-2005, 16:08:51 CET

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**Offset cylindrical reflector antenna fed by a parallel-plate Luneburg lens for *automotive radar* applications in mm-wave.**

**Author(s)**

Young–Jin–Park; Herschlein–A; Wiesbeck–W.

**Source**

IEEE Antennas and Propagation Society International Symposium, vol.4, San Antonio, TX, USA, 16–21 June 2002.

In: p.588–91 vol.4, 2002.

COPYRIGHT BY Inst. of Electrical Engineers, Stevenage, UK

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**Design of a multi beam feed using a nonradiative dielectric Rotman lens.**

**Author(s)**

Jae–Gon–Lee; Jeong–Hae–Lee; Heung–Sik–Tae.

**Source**

IEICE–Transactions–on–Communications (Japan), vol.E85–B, no.6, p.1178–84, June 2002. , Published: Inst. Electron. Inf. & Commun. Eng.

COPYRIGHT BY Inst. of Electrical Engineers, Stevenage, UK

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**Wide-scan spherical-lens antennas for *automotive radars*.**

**Author(s)**

Schoenlinner–B; Xidong–Wu; Ebling–J–P; Eleftheriades–G–V; Rebeiz–G–M.

**Source**

IEEE–Transactions–on–Microwave–Theory–and–Techniques (USA), vol.50, no.9, p.2166–75, Sept. 2002. , Published: IEEE.

COPYRIGHT BY Inst. of Electrical Engineers, Stevenage, UK

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**Millimeter-wave folded reflector antennas with high gain, low loss, and low profile.**

**Author(s)**

Menzel–W; Pilz–D; Al–Tikriti–M.

**Source**

IEEE–Antennas–and–Propagation–Magazine (USA), vol.44, no.3, p.24–9, June 2002. , Published: IEEE.

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**Compact *multibeam* imaging antenna for *automotive radars*.**

**Author(s)**

Schoenlinner–B; Rebeiz–G–M.

**Source**

Proceedings of 2002 International Microwave Symposium (MTT 2002), vol.2, Seattle, WA, USA, 2–7 June 2002.

In: p.1373–6 vol.2, 2002.

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**Millimeter-wave printed circuit antenna system for *automotive* applications.**

**Author(s)**

Denisenko–V–V; Shubov–A–G; Majorov–A–V; Egorov–E–N; Kashaev–N–K; Ed. by Sigmon–B.

**Source**

2001 IEEE MTT–S International Microwave Symposium Digest, vol.3, Phoenix, AZ, USA, 20–25 May 2001. In: p.2247–50 vol.3, 2001.

**Compact multibeam dual-frequency (24 and 77 GHz) imaging antenna for automotive radars.**

**Author(s)**

Schoenlinner-B; Ebling-J-P; Kempel-L-C; Rebeiz-G-M.

**Source**

33rd European Microwave Conference Proceedings, vol.2, Munich, Germany, 7–9 Oct. 2003.  
In: p.785–8 vol.2, 2003.

COPYRIGHT BY Inst. of Electrical Engineers, Stevenage, UK

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**Eight-channel 77-GHz front-end module with high-performance synthesized signal generator for FM-CW sensor applications.**

**Author(s)**

Mayer-W; Meilchen-M; Grabherr-W; Nuchter-P; Guhl-R.

**Source**

IEEE-Transactions-on-Microwave-Theory-and-Techniques (USA), vol.52, no.3, p.993–1000, March 2004. , Published: IEEE.

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**Comparison of amplitude-matching and complex monopulse algorithms with respect to SNR.**

**Author(s)**

Kederer-W; Detlefsen-J.

**Source**

AEU-International-Journal-of-Electronics-and-Communications (Germany), vol.57, no.3, p.168–72, 2003. , Published: Urban Fischer Verlag.

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**Multi-beam antenna of short-range navigation system of a car.**

**Author(s)**

Lindvall-A-V; Lindvall-V-R; Shcherbakov-G-I.

**Source**

Proceedings of 12th International Crimean Conference on Microwave and Telecommunication Technology (CriMICO'2002), Sevastopol, Crimea, Ukraine, 9–13 Sept. 2002.  
Sponsors: FSUE SPO 'Orion'(Moscow, Russia), FSUE 'SCRRTI'(Moscow, Russia), Ukrspetsexport Co.(Kiev, Ukraine), OJS SPE 'Saturn' (Kiev, Ukraine)Interface Co.(Moscow, Russia)SSPE 'Istok' (Fryazino, Russia) SRI of Telecommun. NTUU KPI (Kiev, Ukraine)SSIE 'Orion' (Kiev, Ukraine)SRI of Radiomater. (Belarus)Black Sea Branch of Lomonosov Moscow State Univ. (Sevastopol)Sevastopol Nat. Tech. Univ. (Ukraine) Marine Hydrophysical Inst. NAS Ukraine (Sevastopol)STC 'Omega' (Sevastopol, Ukraine)Nat. Center of Space Vehicles Testing & Controlling (Yevpatoria, Ukraine)Crimean Astrophys. Observatory (Katsiveli, Ukraine)Weber Co. (Sevastopol, Ukraine).  
In: p.567–8, 2002.

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**A low profile 77 GHz three beam antenna for *automotive radar*.**

**Author(s)**

Kolak-F; Eswarappa-C; Ed. by Sigmon-B.

**Source**

2001 IEEE MTT-S International Microwave Symposium Digest, vol.2, Phoenix, AZ, USA, 20–25 May 2001.  
In: p.1107–10 vol.2, 2001.

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**Design of a nonradiative dielectric Rotman lens in the millimeter wave frequency.**

**Author(s)**

Jae-Gon-Lee; Jeong-Hae-Lee; Heung-Sik-Tae; Ed. by Sigmon-B.

**Source**

2001 IEEE MTT-S International Microwave Symposium Digest, vol.1, Phoenix, AZ, USA, 20–25 May 2001.  
In: p.551–4 vol.1, 2001.

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**New conception of the low cost *multibeam* antennas in the MM-wave regime for *radar* systems of transport means.**

**Author(s)**

Minin-I-V; Minin-O-V.

**Source**

Gateway to 21st Century Communications Village. VTC 1999–Fall. IEEE VTS 50th *Vehicular* Technology Conference, vol.5, Amsterdam, Netherlands, 19–22 Sept. 1999.  
In: p.3043–6 vol.5, 1999.

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***Multi-beam automotive radar* front end using non-contact cylindrical NRD switch.**

**Author(s)**

Tanizaki-T; Nishida-H; Nishiyama-T; Yamada-H; Sakamoto-K; Ishikawa-Y; Ed. by Meixner-R.

**Source**

1998 IEEE MTT-S International Microwave Symposium Digest (Cat. No.98CH36192), vol.2, Baltimore, MD, USA, 7–12 June 1998.  
In: p.521–4 vol.2, 1998.

COPYRIGHT BY Inst. of Electrical Engineers, Stevenage, UK

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**Performance analysis and optimization of *vehicular* spread spectrum *radar* using *multi-beam* antenna.**

**Author(s)**

Hanada-Y; Kohno-R.

**Source**

Proceedings of Conference on Intelligent Transportation Systems, Boston, MA, USA, 9–12 Nov. 1997.  
In: p.661–6, 1997.

COPYRIGHT BY Inst. of Electrical Engineers, Stevenage, UK

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***Vehicular spread spectrum radar for multiple targets detection using multi-beam antenna.***

***Author(s)***

Hanada-Y; Kohno-R.

***Source***

IEICE-Transactions-on-Fundamentals-of-Electronics-Communications-and-Computer-Sciences (Japan), vol.E80-A, no.12, p.2517-25, Dec. 1997. , Published: Inst. Electron. Inf. & Commun. Eng.

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***Simple design of dual-beam leaky-wave antennas in microstrips.***

***Author(s)***

Luxey-C; Latheurte-J-M.

***Source***

IEE-Proceedings-Microwaves-Antennas-and-Propagation (UK), vol.144, no.6, p.397-402, Dec. 1997. , Published: IEE.

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***Vehicular spread spectrum radar using multi-beam antenna.***

***Author(s)***

Hanada-Y; Kohno-R.

***Source***

1997 IEEE 47th *Vehicular* Technology Conference. Technology in Motion, vol.1, Phoenix, AZ, USA, 4-7 May 1997.  
In: p.116-20 vol.1, 1997.

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***Unequally-spaced multiple-beam synthesis for bifunctional radar.***

***Author(s)***

Valle-P; Naldi-M; Bardati-F.

***Source***

Proceedings of International Symposium on Phased Array Systems and Technology, Boston, MA, USA, 15-18 Oct. 1996.  
Sponsors: IEEE Boston Sect., IEEE Aerospace & Electron. Syst. Soc., IEEE Commun. Soc., IEEE Antennas & Propagation Soc., IEEE Microwave Theory & Tech. Soc.  
In: p.171-6, 1996.

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***Millimeter-wave imaging of traffic scenarios.***

***Author(s)***

Schneider-R; Wanielik-G; Wenger-J.

***Source***

Proceedings of Conference on Intelligent Vehicles, Tokyo, Japan, 19-20 Sept. 1996.  
Sponsors: IEEE Ind. Electron. Soc., Assoc. Electron., Technol. Automobile *Traffic* & Driving, IEEE VTS Tokyo Chapter, Int. Assoc. *Traffic* & Safety Sci., Japanese Soc. Artificial IntelligenceMech. Eng. Lab., AIST, MITISeikei UnivSoc. *Automotive* Eng. JapanInst. Electr. Eng. JapanIEICE of JapanInst. Image Electron. Eng. JapanInst. Syst., Control & Inf. EngJapan Soc. Mech. EngRobotics Soc. JapanSoc. Instrum. & Control Eng.  
In: p.327-32, 1996.

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**Miniaturized, *multi-beam*, solid-state scanning laser *radar* in automobile collision avoidance sensor systems.**

**Author(s)**

Sargent-R.

**Source**

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In: Proceedings-of-the-SPIE-The-International-Society-for-Optical-Engineering (USA), vol.2472, p.82-92, 1995.

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**Congruential frequency hop signals for multi-user environments: a comparative analysis.**

**Author(s)**

Bellegarda-J-R.

**Source**

ICASSP 90. 1990 International Conference on Acoustics, Speech and Signal Processing (Cat. No.90CH2847-2), Albuquerque, NM, USA, 3-6 April 1990, p.2903-6 vol.5.

Sponsors: IEEE.

Published: IEEE, New York, NY, USA, 1990, 5 vol. 2970 pp.

COPYRIGHT BY Inst. of Electrical Engineers, Stevenage, UK

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**Time-frequency properties of extended quadratic congruential frequency hop signals.**

**Author(s)**

Bellegarda-J-R.

**Source**

ICASSP-89: 1989 International Conference on Acoustics, Speech and Signal Processing (IEEE Cat. No.89CH2673-2), Glasgow, UK, 23-26 May 1989, p.2669-72 vol.4.

Sponsors: IEEE.

Published: IEEE, New York, NY, USA, 1989, 4 vol. 2833 pp.

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S1: (1785257) auto or automotive or vehicular or (motor adj vehicle) or car or traffic

S2: (83502) radar

S3: (15114) S1 and S2

S4: (106030) multi-lobe or multi-beam or (multi adj (beam or lobe)) or multibeam or multilobe or...

S5: (996) S3 and S4

S6: (690833) lens

S7: (282433) S5 an d6

S8: (343) S5 and S6

S9: (1321722) oblique or obliquely or slant or aslant or downward

S10: (119) S8 and S9

S11: (40833) parallel near5 (ground or road or roadway or street)

S12: (11) S8 and S11

S13: (249233) oblique or obliquely

S14: (37216) ("342").CLAS.

S15: (116) S4 and S13 and S14

S16: (113) S15 not S10

S17: (18) S8 and S13

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|-------------|-----------------|-------|----------|-------|--------------|-------|-------|--------|-----|-----|---------|
| 1           |                 |       |          |       | 342/104      | 434   |       |        |     |     |         |
| 2           |                 |       |          |       | 342/117      | 163   |       |        |     |     |         |
| 3           |                 |       |          |       | 342/174      | 552   |       |        |     |     |         |
| 4           |                 |       |          |       | 342/175      | 676   |       |        |     |     |         |
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| 6           |                 |       |          |       | 342/71       | 360   |       |        |     |     |         |
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| 10          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 11          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 12          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 13          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 14          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 15          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 16          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 17          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 18          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 19          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 20          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 21          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 22          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 23          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 24          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 25          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 26          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 27          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 28          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 29          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 30          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 31          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 32          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 33          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 34          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 35          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 36          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 37          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 38          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 39          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 40          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 41          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 42          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 43          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 44          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 45          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 46          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 47          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 48          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 49          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 50          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 51          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 52          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 53          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 54          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 55          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 56          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 57          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 58          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 59          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 60          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 61          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 62          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 63          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 64          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 65          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 66          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 67          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 68          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 69          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 70          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 71          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 72          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 73          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 74          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 75          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 76          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 77          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 78          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 79          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 80          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 81          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 82          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 83          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 84          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 85          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 86          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 87          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 88          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 89          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 90          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 91          |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 92          |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 93          |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 94          |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 95          |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 96          |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 97          |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 98          |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 99          |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 100         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 101         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 102         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 103         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 104         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 105         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 106         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 107         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 108         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 109         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 110         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 111         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 112         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 113         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 114         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 115         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 116         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 117         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 118         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 119         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 120         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 121         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 122         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 123         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 124         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 125         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 126         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 127         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 128         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 129         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 130         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 131         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 132         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 133         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 134         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 135         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 136         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 137         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 138         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 139         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 140         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 141         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 142         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 143         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 144         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 145         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 146         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 147         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 148         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 149         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 150         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 151         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 152         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 153         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 154         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 155         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 156         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 157         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 158         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 159         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 160         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 161         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 162         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 163         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 164         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 165         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 166         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 167         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 168         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 169         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 170         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 171         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 172         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 173         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 174         |                 |       |          |       | 342/174      |       |       |        |     |     |         |
| 175         |                 |       |          |       | 342/175      |       |       |        |     |     |         |
| 176         |                 |       |          |       | 342/70       |       |       |        |     |     |         |
| 177         |                 |       |          |       | 342/71       |       |       |        |     |     |         |
| 178         |                 |       |          |       | 342/72       |       |       |        |     |     |         |
| 179         |                 |       |          |       | 342/76       |       |       |        |     |     |         |
| 180         |                 |       |          |       | 342/79       |       |       |        |     |     |         |
| 181         |                 |       |          |       | 342/104      |       |       |        |     |     |         |
| 182         |                 |       |          |       | 342/117      |       |       |        |     |     |         |
| 183         |                 |       |          |       |              |       |       |        |     |     |         |